WHAT IS CLAIMED IS:

1. A resin roller which is produced by disposing a core body in a forming metal mold having a cylindrical metal mold and core supporting members furnished at both edge parts of the cylindrical metal mold as well as causing the core supporting members to hold said both edge parts, and pouring a forming resin into the metal mold and solidifying it,

characterized in that the resin roller has the core body of the same outer diameter over a full length and a cylindrical resin-formed body,

sealing members are furnished around the core body in the vicinity of both edge parts of the resin-formed body, and

the core body is disposed such that the sealing members contact edge faces at sides of a roller forming space.

2. The resin roller as set forth in claim 1, characterized in that grooves are defined for attaching E-rings and the E-rings are attached in the grooves, and when the core body is disposed in the metal mold, the sealing members are provided to the core body such that the sealing members respectively contact the E-rings and the edge faces of the core supporting members.

3. The resin roller as set forth in claim 1, characterized in that the cylindrical member is attached to

the core body and when the core body is disposed in the metal mold, the sealing members are provided to the core body such that the sealing members respectively contact the cylindrical metal mold and the core supporting members.

4. The resin roller as set forth in claim 1, characterized in that the sealing members are provided to the core body and when the core body is disposed within the metal mold, the edge faces of the sealing members contact the edge faces of the core supporting members.

5. The resin roller as set forth in claim 1, characterized in that the core body is defined with grooves for attaching the sealing members, and when the core body is disposed within the metal mold, the sealing members are disposed such that the sealing members contact the edge faces of the core supporting members in the grooves.

6. A resin roller, which has the core body of the same outer diameter over a full length and a cylindrical resin-formed body provided at the center part of the core body,

characterized in that the sealing members are disposed around the core body in the vicinity of both edges of the resin-formed body, and edge faces of the sealing members are the same as edge faces of the resin-formed body or project.

7. A method of producing the resin roller, comprising the step of disposing the core supporting members at both

edge parts of the cylindrical metal mold and holding the core body with both core supporting members, and

the step of pouring the forming resin into the roller forming space formed between the cylindrical metal mold and the core supporting members and solidifying the forming resin to form a resin-formed body around the core body,

characterized by disposing the sealing members around the core body in the vicinity of the edge parts of the resin-formed body, elastically contacting the sealing members to the sides of the roller forming space of the core supporting members, and, under this condition, pouring the forming resin into the roller forming space.

8. A resin roller, characterized in that the resin roller is formed in the roller main body by providing a cylindrical resin layer around the core body, and the roller main body is chamfered or rounded at corners of edge parts of the resin layers, and the resin layer is formed on the surface with a surface layer.

9. The resin roller as set forth in claim 8, wherein the hardness of the resin layer is 25° or lower (JIS-A).

10. The resin roller as set forth in claim 8 or 9, characterized in that a dimension of the part for chamfering or rounding the corner of the resin layer is 1 to 40 times of a swelling amount of the edge part having a larger diameter than the center part of the formed roller main body.

11. A method of producing a resin roller, comprising the step of disposing the core body in the forming metal mold, pouring the thermosetting liquid resin into the metal mold for hot-setting, and forming the roller main body furnished with a cylindrical resin layer around the core body,

the step of releasing the roller main body from the metal mold, followed by chamfering or rounding the corners of the edge parts of the resin layers, and

the step of forming the surface layer around the resin layers.

12. The method of producing the resin roller as set forth in claim 11, wherein the step of chamfering or rounding the corners of the edge parts of the resin layers comprises a step of heating the corners to fuse and remove the resin at the corners.

13. The method of producing the resin roller as set forth in claim 11, wherein the step of chamfering or rounding the corners of the edge parts of the resin layers comprises a step of coating a solvent to the corners for dissolving and removing the resin at the corners.

14. The method of producing the resin roller as set forth in any of claims 11 to 13, wherein the hardness of the resin layer is 25° or lower (JIS-A).

15. The method of producing the resin roller as set forth in any of claims 11 to 13, wherein when the swelling amount of the edge part in comparison with that of the center part

of the formed roller body is 1, the swelling amount of the part for chamfering or rounding is 1 to 40 times of said swelling amount in the diameter direction and the axial direction.

16. The method of producing the resin roller as set forth in any of claims 11 to 13, wherein the thermosetting liquid resin contains, as main components,

(A) polymer containing at least one alkenyl group in molecule and a repeating unit composing a main chain being mainly oxy alkylene unit or saturated hydrocarbon unit,

(B) a hardening agent containing at least two hydrosilyl group in molecule,

(C) catalyst made hydrosilyl, and

(D) conductivity giving agent.

17. A roller producing apparatus using a thermosetting liquid resin, producing a roller which is composed of a core body and a resin-made elastic layer covering around the core body by use of a metal mold having a structure disposed with core supporting members holding a roller forming space therebetween at both ends of a cylindrical metal mold inserted inside with the core body,

characterized in that the core supporting member is provided with a mold-inner pressure adjusting mechanism.

18. The roller producing apparatus using a thermosetting liquid resin as set forth in claim 17, wherein the mold-inner pressure adjusting mechanism provided in the core

supporting member is equipped with a volume-variable spare room communicating with the roller forming space.

19. The roller producing apparatus as set forth in claim 17 or 18, wherein when an inner diameter of the cylindrical metal mold is D, an outer diameter of the roller is d, and an outer diameter is d_s, the inner diameter D of the cylindrical metal mold, the outer diameter d of the roller, and the outer diameter d_s are prescribed such that a value of cross sectional shrinkage factor α defined with $(D2-d2)/(D2-ds2)$ is 0.02 to 0.06, and the thickness of the elastic layer expressed with $(d-d_s)/2$ is 1 mm or more.

20. A roller producing apparatus using a thermosetting liquid resin, producing a roller which is composed of a core body and a resin-made elastic layer covering around the core body by use of a metal mold having a structure disposed with core supporting members holding a roller forming space therebetween at both ends of a cylindrical metal mold inserted inside with the core body,

characterized in that the core supporting member is provided with a mold-inner pressure adjusting mechanism, and a mold-inner pressure during hot-setting is adjusted to be 100 kg/cm^2 or lower.

21. A method for producing a roller for an electrophotographic apparatus composed of a main body formed with a hardening type liquid resin and support rods for supporting both edges of the main body, characterized by preparing a

roller forming metal mold provided with a space for forming a roller main body as well as provided with a resin injecting inlet for filling the hardening type liquid resin in the roller forming space, storing separately a hardening type liquid resin containing a ~~cross~~ linking agent and a hardening type liquid resin containing a catalyst, respectively measuring to be set amounts thereof, and as mixing both hardening liquid resins, injecting a mixture into the forming space from the resin pouring inlet so as to effect a hardening reaction for forming the roller main body.

22. The method for producing rollers with the hardening type liquid resin as set forth in claim 21, wherein temperature of the hardening type liquid resin at injecting is adjusted to be within a range of 20 to 70°C.

23. The method for producing rollers with the hardening type liquid resin as set forth in claim 21 or 22, wherein viscosity of the hardening type liquid resin at injecting is adjusted to be 5000 poise.

24. The method for producing rollers with a hardening type liquid resin as set forth in claim 21 or 22, wherein the hardening type liquid resin containing the cross linking agent and the other hardening type liquid resin containing the catalyst are respectively added with the conductivity giving agent of the same amount.

25. The method for producing rollers with the hardening type liquid resin as set forth in claim 21 or 22, wherein the composition of the hardening type liquid resin has polymer containing at least one alkenyl group in molecule and a repeating unit composing a main chain being mainly oxy alkylene unit or saturated hydrocarbon unit, and the cross linking agent has at least two hydrosilyl group in molecule.

26. An apparatus of producing a roller for an electro-photographic apparatus composed of a main body formed with a hardening type liquid resin and support rods for supporting both edges of the main body, characterized by providing a roller forming metal mold provided with a space for forming a roller main body as well as provided with a resin injecting inlet for filling the hardening type liquid resin in the roller forming space, containers for storing separately a hardening type liquid resin containing a cross linking agent and another hardening type liquid resin containing a catalyst, an injecting device furnished with measuring mechanisms for respectively measuring both resins to be set amounts thereof, and a mixing mechanism for mixing both measured liquid resins, injecting, as mixing both resins, a mixture into the forming space from the resin pouring inlet so as to effect a hardening reaction for forming the roller main body.

27. The apparatus of producing a roller with the hardening type liquid resin as set forth in claim 26, wherein a temperature adjusting instrument is provided for adjusting temperature of the hardening type liquid resin at injecting to be within a range of 20 to 70°C.

28. The apparatus of producing a roller with the hardening type liquid resin as set forth in claim 26 or 27, wherein the hardening type liquid resin containing the cross linking agent and the other hardening type liquid resin containing the catalyst are respectively added with the conductivity giving agent of the same amount.

29. The apparatus of producing a roller with the hardening type liquid resin as set forth in claim 26 or 27, wherein the composition of the hardening type liquid resin has polymer containing at least one alkenyl group in molecule and a repeating unit composing a main chain being mainly oxy alkylene unit or saturated hydrocarbon unit, and the cross linking agent has at least two hydrosilyl group in molecule.

30. An apparatus of injection-forming roller characterized by having a cylindrical metal mold inserted inside with the core body and core supporting members detachably fitted to both edge parts in the axial direction of the cylindrical metal mold as holding both edges of the inside inserted core body, and is composed by disposing heating mechanisms for hot-setting the resin material

introduced in a roller forming space around the injection forming metal mold having the roller forming space, said core supporting member having a 1st obliquity tilting at a fixed angle with respect to an axial and vertical directions in the outer wall face, and said heating mechanism having an inner wall face contacting to hold the injection forming metal mold under a condition of closing the heating mechanism and having a 2nd obliquity pressing the 1st obliquity to the inner wall face, whereby the injection forming metal mold is tightened and held.

31. The apparatus of injection-forming roller as set forth in claim 30, wherein the core supporting member has the 1st obliquity at the outer periphery, and the heating mechanism has pawl members with the 2nd obliquity pressing the 1st obliquity to the inner wall face under the condition of closing the heating mechanism.

32. The apparatus of injection-forming roller as set forth in claim 30, wherein a brim part having the 1st obliquity is expanded at an outer periphery of the fitting position of the core supporting member and the cylindrical metal mold, and the brim part is engaged with the inner wall face of the heating mechanism under the condition of closing the heating mechanism, while the groove with the 2nd obliquity pressing the 1st obliquity is formed in concave shape.

33. The apparatus of injection-forming roller as set forth in any of claims 30 to 32, wherein a heat resistant elastic member is interposed between the 1st obliquity and 2nd obliquity.

34. The apparatus of injection-forming roller as set forth in any of claims 30 to 32, wherein the tilt angle of the 1st obliquity is set in a range of 5 to 30°.

35. A resin roller formed with a cylindrical resin-formed body around the core body, characterized in that the resin-formed body is formed as standing along the core body toward the edge of the core body.

36. The resin roller as set forth in claim 35, produced by disposing the core body in the forming metal mold having a cylindrical metal mold and core supporting members furnished at both edge parts of the cylindrical metal mold as well as causing the core supporting members to hold said both edge parts, and pouring the resin into the metal mold and solidifying it.

37. The resin roller as set forth in claim 35 or 36, characterized in that the standing state of the resin-formed body reduces a diameter in arc toward the edge of the core body.

38. The resin roller as set forth in claim 35 or 36, characterized in that the standing state of the resin-formed body reduces a diameter linearly toward the edge of the core body.

39. The resin roller as set forth in claim 35 or 36, characterized in that the standing state of the resin-formed body reduces a diameter stepwise toward the edge of the core body.

40. A resin roller forming metal mold which holds the cylindrical metal mold and the core body furnished at both edge parts of the cylindrical metal mold and inserted inside of the cylindrical metal mold,

characterized in that a ring shaped concave groove is formed at an opening edge of a core holding hole provided in the core supporting member, said groove being larger in diameter than an outer diameter of the core body to be inserted in said core holding hole.

41. The resin roller as set forth in claim 40, characterized in that the ring shaped concave groove reduces the diameter as advancing an inner part of the core holding hole.